

U.S. Patent Application Serial No. 10/574,650
Amendment filed May 8, 2008
Reply to OA dated February 12, 2008

REMARKS

Claims 1-16 are pending in this application. Claims 1-16 are amended herein. Upon entry of this amendment, claims 1-16 will be pending. Entry of this amendment and reconsideration of the rejections are respectfully requested.

No new matter has been introduced by this Amendment. Support for the amendments to the claims is detailed below.

Claim 2 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Office action paragraph no. 2)

The rejection of claim 2 is overcome by the amendment to the claim.

The Examiner states that claim 2 recites an improper Markush group. Claim 2 has been amended to use the standard Markush group wording, "the group consisting of"

Claims 1-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Iseda (P.G. Pub. No. 2003/0231976). (Office action paragraph 4)

Reconsideration of the rejection is respectfully requested in view of the amendments to the claims.

First of all, base claim 1 has been amended to amend the lower limit on the amount of C in the claimed range from "0.1" to --0.13--%. Support for this amendment may be found, for example, in Example no. 4 in Table 1 on page 17 of the present specification, in which the C value is 0.13%.

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Applicants submit that the disclosed range for C in Iseda is 0.03-0.12% (abstract, paragraph [0022]). Iseda is very clear about the compositional ranges of the invention, and specifically states: "If the content of carbon exceeds 0.12%, Cr nitride is increased and weldability is decreased. Thus, the upper limit was set to 0.12%. A preferable content of C is 0.05 to 0.1%" (paragraph [0052]). Therefore, there is no suggestion or motivation in Iseda for any C value above 0.12%.

With the amendment to the present claims, there is **no overlap** in the compositional range of C between the present claims and the disclosure of Iseda, and therefore, there is no *prima facie* case of obviousness for the composition of the present claims.

In addition, the claims have been amended from reciting "A heat resistant cast steel" to recite --A hydrogen producing reaction tube--. Support for this amendment may be found in the original recitation of the claims that the cast steel was "for hydrogen producing reaction tubes," and is supported by the general disclosure of the specification, for example, in paragraph [0006], and in the "specimen tube" Examples in paragraph [0025].

This amendment more precisely defines the present invention as a hydrogen producing reaction tube formed of a given heat-resistant cast steel and having excellent properties in aged ductility and creep rupture strength. The Iseda reference discloses an austenitic stainless steel tube, excellent in steam oxidation resistance and high temperature strength, which is used in a superheater, reheater, tubes and pipes for a boiler or chemical industry. However, there is no disclosure or suggestion in the Iseda reference regarding the requirements of an alloy suitable for use in a hydrogen producing reaction tube which is excellent in both aged ductility and creep rupture strength. These properties are important for the use of the hydrogen producing reaction tube with

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a good stability over a prolonged period of time. Accordingly, there is no motivation to try to modify the Iseda reference to achieve the properties achieved by the present invention.

Claims 1-16, as amended, are therefore not obvious over Iseda (U.S. Publ. No. 2003/0231976).

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,
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